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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,464	09/21/2001	Uzi Ram	003955.00021	3812
22907	7590	02/15/2005	EXAMINER	
BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			RAMAKRISHNAIAH, MELUR	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

<b>Application No.</b> 09/957,464  <b>Examiner</b> Melur Ramakrishnaiah	<b>Applicant(s)</b> RAM, UZI	
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*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 19 October 2004.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1,2 and 9 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,2 and 9 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.
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***Specification***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to provide an enabling disclosure.

***Claim Rejections - 35 USC § 112***

2. Claims 1-2, 9, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1 and 2 all recite the limitation: multiple terminals generate signals using one of one-dimensional ALOHA and two-dimensional ALOHA access scheme and claim 9 recite the limitation: signals being generated using a one of a one-dimensional ALOHA and two-dimensional ALOHA access scheme. There is hardly any explanation or elaboration of what these terms mean other than a brief reference in summary, paragraph (06) which discloses the following: The OFDMA scheme may also be employed in conjunction with two-dimensional ALOHA based schemes where data slots are based on both time and frequency. This hardly gives much explanation about the one-dimensional ALOHA and two-dimensional ALOHA access scheme.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, and 9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Breynaert et al. (EP 0930744 A1, hereinafter Breynaert) in view of Crozier et al. (Performance of 2-dimensionsl sloppy-slotted ALOH random acces signaling, Wireless Communications, 1992, conference proceedings 1992 IEEE International conference on Selected topiocs, hereinafter Crozier).

Regarding claim 1 Breynaert discloses a method of a satellite communication system comprising: coordinating multiple terminals (2-7, fig. 4) in a satellite network such that symbol timing of each of the multiple terminals in the satellite network are synchronized (page 5 lines 31-34), configuring frequency separation for each of the multiple terminals to obtain near orthogonality at the reception between a desired demodulated channel and transmission on neighboring channels (paragraphs: 0017, 0026-0028).

Regarding claim 2, Breynaert discloses the following: in an orthogonal frequency division multiplexed satellite system , a method comprising establishing symbol synchronization between multiple remote terminals utilizing a central clock recovered from a reference down stream channel output from a satellite (paragraph: 0036).

Regarding claim 9, Breynaert discloses an apparatus comprising a hub (9, fig. 5) including one or more antennas, RF receivers, modulators, demodulators, clocks, and digital signal processors (not shown), the hub being configured to receive signals using OFDM scheme and transmit timing information to a plurality of remote terminals (2, 7, figs. 4-5) based on a timing synchronization feedback/acknowledgement loop (paragraphs: 0026-0028, 0036).

Breynaert differs from claims 1, 2, and 9 in that he does not teach the following: multiple terminals generate signals under one of a one-dimensional ALOHA and two-dimensional ALOHA access scheme.

However, Crozier discloses 2-dimensional-slotted ALOHA random access signaling which teaches the following: one-dimensional ALOHA and two-dimensional ALOHA access scheme (see the entire document)

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Breynaert's system to provide for the following: multiple terminals generate signals under one of a one-dimensional ALOHA and two-dimensional ALOHA access scheme as this arrangement would facilitate to obtain better throughput as taught by Crozier (see abstract), thus facilitating greater efficiency in satellite communication system.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 2, 9 have been considered but are moot in view of the new ground(s) of rejection.

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However, rejection of claims 1, 2, and 9 under 35 U.S.C 112 , first paragraph is maintained as applicants arguments regarding these rejection are not persuasive. In response to rejection of claims 1, 2, 9 for lack of adequate disclosure regarding 2-dimensional ALOHA under 35 U.S.C 112, first paragraph, Applicant merely refers to various pages of the specification as explaining 2-dimensional ALOHA which do not really explain it other than stating two-dimensional ALOHA based schemes can be used. For example on page 2 of the specification in paragraph (06), it states that the OFDMA scheme may also be employed in conjunction with two-dimensional ALOHA based scheme where data slots are based on both time and frequency. This hardly illustrates what two two-dimensional ALOHA based scheme is. Applicant further refers to page 7 and paragraph 22 for an explanation of two-dimensional ALOHA based scheme. But here specification discloses the following: In particular, it has been found that OFDMA works particularly well with either one-dimensional or a two-dimensional ALOHA scheme. This passage merely states use of one-dimensional or a two-dimensional ALOHA scheme, but does not illustrate the concept. Again applicant refers to paragraph 25 on page 8 for explanation of explanation of two-dimensional ALOHA based scheme. But this paragraph, as admitted by the applicant, merely mentions, applicability of two-dimensional ALOHA based scheme. As can be seen from applicant's various references to two-dimensional ALOHA based scheme in the specification, it merely states its use, and does not illustrate what two-dimensional ALOHA based scheme, or how it works. Therefore, rejection of claims 1-2 and 9, under 35 U.S.C 112 first paragraph is maintained.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (703) 305-1461. The examiner can normally be reached on M-F 6:30-4:00; every other F Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703)305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Melur Ramakrishnaiah  
Primary Examiner  
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